



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,043	12/08/2003	Jyh Chain Lin		7551

25859 7590 08/22/2005
WEI TE CHUNG
FOXCONN INTERNATIONAL, INC.
1650 MEMOREX DRIVE
SANTA CLARA, CA 95050

EXAMINER

HAN, JASON

ART UNIT PAPER NUMBER

2875

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,043

Applicant(s)

LIN, JYH CHAIN

Examiner

Jason M. Han

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 8, 9, 11-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8, 9, 11-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to Claims 1-3, 6, 8-9, 11-13, and 15-16 have been considered but are moot in view of the new ground(s) of rejection.

The following claims have been rejected in light of the specification, but rendered the broadest interpretation as construed by the examiner [MPEP 2111]. It should further be noted that the limitation, "in a form of concave", or similarly, was presented under an open-ended statement (e.g., "comprising") and was interpreted by the examiner to be any surface having at least a part in concave form.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

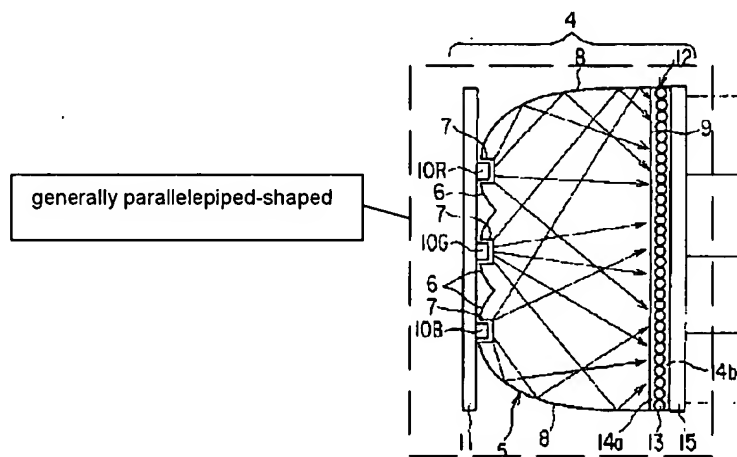
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujiwara (JP2002-133932A).
3. With regards to Claim 1, Fujiwara discloses a backlight module including:
 - A light source group having a plurality of point light sources [Drawing 1: (10RGB)]; and

Art Unit: 2875

- A light guide plate [Drawing 1: (5)] having a light input surface [Drawing 1: (6-8)] for receiving light and a light output surface for emitting light [Drawing 1: (9)], the light input surface being concave;
 - Wherein the light source group faces the light input surface, and the light input surface has a curvature matching a distribution of light from the light source group [Drawing 1].
4. With regards to Claim 2, Fujiwara discloses the light guide plate being generally parallelepiped-shaped [Drawings 1-2].



5. With regards to Claim 8, Fujiwara discloses the light input surface [Drawing 1: (6-8)] being disposed opposite the light output surface [Drawing 1: (9)].
6. With regards to Claim 11, Fujiwara discloses the light input surface [Drawing 1: (6-8)] adjoining the light output surface [Drawing 1: (9)].
7. Claims 1, 3, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurokawa et al. (JP2001-014922A).
8. With regards to Claim 1, Kurokawa discloses a backlight module including:

Art Unit: 2875

- A light source group having a plurality of point light sources [Drawing 2: (11)];
and
 - A light guide plate [Drawing 2: (2)] having a light input surface [Drawing 2: (212, 213)] for receiving light and a light output surface for emitting light [Drawing 2: (22)], the light input surface being concave;
 - Wherein the light source group faces the light input surface, and the light input surface has a curvature matching a distribution of light from the light source group [Drawings 1-2].
9. With regards to Claim 3, Kurokawa discloses the light guide plate being generally wedge-shaped [Drawing 1: (2)].
10. With regards to Claim 11, Kurokawa discloses the light input surface [Drawing 2: (12)] being adjoined to the light output surface [Drawing 2: (22)].
11. With regards to Claim 13, Kurokawa discloses a reflecting plate [Drawing 1: (3)] being disposed under the light guide plate.
12. Claims 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurokawa et al. (JP2001-014922A).
13. With regards to Claim 15, Kurokawa discloses a light module including:
- A light guide plate [Drawing 2: (2)] defining a light input surface [Drawing 2: (212, 213)] for receiving light, said light input surface essentially extending in a direction longitudinally; and
 - A light source group having a plurality of spaced light sub-sources [Drawing 2: (11)] generally arranged along said direction;

Art Unit: 2875

- Wherein at least one of said light input surface [Drawing 2: (212)] and a dispersion manner of said plurality of spaced light sub-sources is configured to be in a form of concave to conform with the other so as to form no dark zones in the light guide plate [Abstract: eliminating lack of light intensity between said sub-sources].

14. With regards to Claim 16, Kurokawa discloses the light input surface [Drawing 2: (212)] being configured to be in a form of concave.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara (JP2002-133932A) or Kurokawa et al. (JP2001-014922A).

Both Fujiwara and Kurokawa disclose the claimed invention as cited above, but do not specifically teach the light input surface being spherically concave. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate said input surface into a spherically concave shape, since it has been held to be within the general skill of a worker that mere change of form or shape of an invention involves only routine skill in the art. *Span-Deck Inc. c. Fab-Con, Inc.* (CA 8, 1982) 215USPQ 835. In this case, providing the input surface with a spherically concave shape could better accommodate the light emitting diodes/light

Art Unit: 2875

source group, simplify manufacturing via no rigid edges (i.e., Fujiwara), and better receive or alter the illumination. It should further be noted that the light input surface of Kurokawa [Drawing 2: (212)] would obviously be a spherical concave shape.

16. Claims 9, 17 and 12, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara (JP2002-133932A) or Kurokawa et al. (JP2001-014922A) as applied to Claims 8 and 11, respectively above, and further in view of Hirakata (U.S. Patent 6191833).

Both Fujiwara and Kurokawa disclose the claimed invention as cited above, but do not specifically teach a diffusing plate disposed on the light guide plate and a brightness enhancing film disposed on the diffusing plate.

Hirakata teaches a brightness enhancing film [Figure 14: (PRS)] being disposed on a diffusing plate [Figure 14: (SPS)], which is disposed on a light guide plate [Figure 14: (GLB)]. It should be further noted that Hirakata teaches, "A method has been employed for using the above-noted prism sheet or sheets to increase the brightness or luminance intensity by collection of those rays of incident light diagonally traveling with respect to the liquid crystal panel toward a front face side. Another method is also known which makes use of a recently developed optical film (such as for example "D-BEF" filmTM as manufactured by SUMITOMO-3M Company) as designed to let output light of a light source have polarization characteristics for permitting penetration of only specific rays of the polarized light for re-use purposes while causing the remaining rays to be reflected off [Column 4, Lines 1-12; underline added by examiner]."

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify the backlight module of Fujiwara or Kurokawa to incorporate the diffusing plate and brightness enhancing film/prism plate(s) of Hirakata in order to provide a more uniform and bright illumination.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

Art Unit: 2875

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (8/18/2005)


Stephen Husar
Primary Examiner